





FRU 197-31B10 R1 Geodetic Proposal

Report Date:	October 7, 2009	Survey / DLS Computation Method:	Minimum Curvature / Lubinski
Client:	ExxonMobil	Vertical Section Azimuth:	18.140°
Field:	CO, Rio Blanco County (NAD 27 NZ) ExxonMobil 2008	Vertical Section Origin:	N 0.000 ft, E 0.000 ft
Structure / Slot:	ExxonMobil 31-1S-97W (FRU 197-31B Pad) / FRU 197-31B10	TVD Reference Datum:	
Well:	FRU 197-31B10	TVD Reference Elevation:	6500.0 ft relative to MSL
Borehole:	Original Hole (Est RKB)	Sea Bed / Ground Level Elevation:	6500.000 ft relative to MSL
UWI/API#:		Magnetic Declination:	10.771°
Survey Name / Date:	FRU 197-31B10 R1 ivs 7-Oct-09 / October 7, 2009	Total Field Strength:	52618.798 nT
Tort / AHD / DDI / ERD ratio:	23.997° / 870.29 ft / 4.323 / 0.070	Magnetic Dip:	66.102°
Grid Coordinate System:	NAD27 Colorado State Planes, Northern Zone, US Feet	Declination Date:	October 07, 2009
Location Lat/Long:	N 39 55 6.876, W 108 19 31.354	Magnetic Declination Model:	BGGM 2008
Location Grid N/E Y/X:	N 225807.000 ftUS, E 1207629.000 ftUS	North Reference:	Grid North
Grid Convergence Angle:	-1.82557005°	Total Corr Mag North -> Grid North:	+12.597°
Grid Scale Factor:	0.99997356	Local Coordinates Referenced To:	Well Head

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Sub-Sea TVD (ft)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	DLS (deg/100 ft)	Northing (ftUS)	Easting (ftUS)	Latitude	Longitude
Tie-In / Surface	0.00	0.00	18.14	-6500.00	0.00	0.00	0.00	0.00	0.00	225807.00	1207629.00	N 39 55 6.876	W 108 19 31.354
KOP Build 2° DLS	300.00	0.00	18.14	-6200.00	300.00	0.00	0.00	0.00	0.00	225807.00	1207629.00	N 39 55 6.876	W 108 19 31.354
	500.00	4.00	18.14	-6000.16	499.84	6.98	6.63	2.17	2.00	225813.63	1207631.17	N 39 55 6.942	W 108 19 31.329
Begin Tanget 12°	899.94	12.00	18.14	-5604.44	895.56	62.59	59.48	19.49	2.00	225866.48	1207648.49	N 39 55 7.469	W 108 19 31.128
	1000.00	12.00	18.14	-5506.56	993.44	83.39	79.25	25.97	0.00	225886.24	1207654.97	N 39 55 7.667	W 108 19 31.053
A-groove	1170.28	12.00	18.14	-5340.00	1160.00	118.79	112.89	36.99	0.00	225919.88	1207665.99	N 39 55 8.002	W 108 19 30.926
B-groove	1354.30	12.00	18.14	-5160.00	1340.00	157.05	149.24	48.90	0.00	225956.23	1207677.90	N 39 55 8.365	W 108 19 30.788
	1500.00	12.00	18.14	-5017.49	1482.51	187.34	178.02	58.34	0.00	225985.02	1207687.33	N 39 55 8.653	W 108 19 30.679
	2000.00	12.00	18.14	-4528.41	1971.59	291.28	276.80	90.70	0.00	226083.79	1207719.70	N 39 55 9.638	W 108 19 30.304
	2500.00	12.00	18.14	-4039.33	2460.67	395.23	375.58	123.07	0.00	226182.57	1207752.07	N 39 55 10.624	W 108 19 29.929
Wasatch A	2898.03	12.00	18.14	-3650.00	2850.00	477.97	454.21	148.84	0.00	226261.20	1207777.84	N 39 55 11.409	W 108 19 29.630
	3000.00	12.00	18.14	-3550.26	2949.74	499.17	474.35	155.44	0.00	226281.34	1207784.44	N 39 55 11.610	W 108 19 29.554
	3500.00	12.00	18.14	-3061.18	3438.82	603.12	573.13	187.81	0.00	226380.11	1207816.80	N 39 55 12.596	W 108 19 29.179
Wasatch C	3920.37	12.00	18.14	-2650.00	3850.00	690.51	656.17	215.02	0.00	226463.16	1207844.02	N 39 55 13.425	W 108 19 28.864
10-3/4" Casing Point	3971.48	12.00	18.14	-2600.00	3900.00	701.13	666.27	218.33	0.00	226473.25	1207847.32	N 39 55 13.526	W 108 19 28.826
	4000.00	12.00	18.14	-2572.11	3927.89	707.06	671.91	220.18	0.00	226478.89	1207849.17	N 39 55 13.582	W 108 19 28.804
KOP Drop 2° DLS	4484.12	12.00	18.14	-2098.56	4401.44	807.71	767.55	251.52	0.00	226574.52	1207880.51	N 39 55 14.536	W 108 19 28.441
	4500.00	11.68	18.14	-2083.02	4416.98	810.96	770.64	252.53	2.00	226577.62	1207881.52	N 39 55 14.567	W 108 19 28.430
	5000.00	1.68	18.14	-1587.05	4912.95	869.06	825.85	270.62	2.00	226632.83	1207899.62	N 39 55 15.118	W 108 19 28.220
Vertical Point	5084.06	0.00	18.14	-1503.00	4997.00	870.29	827.02	271.01	2.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	5500.00	0.00	18.14	-1087.06	5412.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
Wasatch G	5612.06	0.00	18.14	-975.00	5525.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	6000.00	0.00	18.14	-587.06	5912.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	6500.00	0.00	18.14	-87.06	6412.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	7000.00	0.00	18.14	412.94	6912.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
Ohio Creek (WF900)	7387.06	0.00	18.14	800.00	7300.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	7500.00	0.00	18.14	912.94	7412.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	8000.00	0.00	18.14	1412.94	7912.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
WF 700	8087.06	0.00	18.14	1500.00	8000.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
WF 500	8447.06	0.00	18.14	1860.00	8360.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	8500.00	0.00	18.14	1912.94	8412.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
7" Casing Point	8597.06	0.00	18.14	2010.00	8510.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	9000.00	0.00	18.14	2412.94	8912.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
WF 400	9017.06	0.00	18.14	2430.00	8930.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	9500.00	0.00	18.14	2912.94	9412.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	10000.00	0.00	18.14	3412.94	9912.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	10500.00	0.00	18.14	3912.94	10412.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
WF 200	10817.06	0.00	18.14	4230.00	10730.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	11000.00	0.00	18.14	4412.94	10912.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
Cameo	11107.06	0.00	18.14	4520.00	11020.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	11357.06	0.00	18.14	4770.00	11270.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
Rollins	11500.00	0.00	18.14	4912.94	11412.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	11537.06	0.00	18.14	4950.00	11450.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
Cozzette Coastal	11837.06	0.00	18.14	5250.00	11750.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
Corcorran Coastal	12000.00	0.00	18.14	5412.94	11912.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216

Corcorran Marine	12387.06	0.00	18.14	5800.00	12300.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
	12500.00	0.00	18.14	5912.94	12412.94	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216
PBHL / TD	12587.06	0.00	18.14	6000.00	12500.00	870.29	827.02	271.01	0.00	226634.00	1207900.00	N 39 55 15.130	W 108 19 28.216

Survey Type: Non-Def Proposal

Survey Error Model: SLB ISCWSA version 24 *** 3-D 95.00% Confidence 2.7955 sigma

Surveying Prog:

<u>MD From (ft)</u>	<u>MD To (ft)</u>	<u>EOU Freq</u>	<u>Survey Tool Type</u>
0.00	300.00	1/100.00	SLB_NSG+SSHOT
300.00	5084.06	1/100.00	SLB_MWD-STD
5084.06	12587.06	1/100.00	SLB_INC-ONLY

<u>Borehole -> Survey</u>
Original Hole (Est RKB) -> FRU 197-31B10 R1 ivs 7-Oct-09
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